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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/288,569	04/09/99	OHTAKI H	DAIN:499

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EXAMINER	
ANGEBRANNDT, M	
ART UNIT	**PAPER NUMBER**
1756	8

DATE MAILED: 02/22/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary	Application No. 09/288,569	Applicant(s) Ohtaki et al.
	Examiner Martin J. Angebranndt	Group Art Unit 1756

☒ Responsive to communication(s) filed on *Nov 30, 2000* .

☒ This action is **FINAL.**

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire *three* month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) *1-27* is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) *1-27* is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐approved ☐disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____ .

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____ .

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☐ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

1 The response provided by the applicant has been read and given careful consideration. Responses to the arguments offered by the applicant are presented after the first rejection to which they are directed. Rejections made in the prior office action, but not repeated below are withdrawn based upon the amendments to the claims and the arguments offered by the applicant.

2 Claim 5,17,18 and 24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 5,17,18 and 24, "type" should be deleted.

3 The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless --
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

4 The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5 Claims 1-3 and 15-17 are rejected under 35 U.S.C. 102(b) as being fully anticipated by Nakamachi et al. '525.

Nakamachi et al. '525 teaches in example 1 (see figure 1), the provision of the hologram (16) with a PET film, a PVB film and a glass substrate on either side. The PET film are chosen so that the plasticizer from the PVB does not migrate into the holographic film. (3/45-56) The use of other materials for the intermediate film is disclosed. (3/49-65). A comparison when no intermediate film was used was also prepared and shifting from green to red occurred. (4/41-43 and 4/56-66) Example 2 uses a polyimide intermediate film.

The examiner holds that the PET or polyimide film is meets the limitation of the adhesive without a plasticizer or the like and that the PVB meets the limitations of the plasticizer of the like containing adhesive. The claims are currently open to the inclusion of additional layers.

The embodiment where the PET film is present meets the claims where shifting does not occur (claim 3), while the comparative embodiment where the PET is not present meets the claim limitations where shifting does occur. As each of these is exemplified, they are anticipatory rendering the issue of appreciation of the invention irrelevant. The applicant's arguments ignore the non-diffusing claimed embodiments in their arguments. The rejection stands.

6 Claims 1,4,6-8,11-13,15-17 and 19-21 are rejected under 35 U.S.C. 102(b) as being fully anticipated by Ueda et al. '598.

The example teaches the with respect to figure 23 a substrate releasable from an adhesive film (101) from figure 22, an adhesive layer (103), a holographic film (2) a second adhesive layer

(55), a color tuning film (54), a third adhesive layer (56) and a second substrate (53). The holographic material is omnidex -706 by Dupont, a photopolymeric composition and the adhesives are NOA-61. (13/8-20) Color tuning films are described. (19/41-20/31) The application of the color tuning film directly to the hologram is disclosed with respect to figure 12(b-5).

The examiner holds that the color tuning film has adhesive properties and therefore acts as an adhesive layer, thereby meeting the limitations of the claims when it is in direct contact with the holographic layer. Alternatively, the claims are anticipated when the color tuning film is in contact with the holographic recording layer through the adhesive layer as then the diffusing species pass through the adhesive layer on that side and interact with the hologram layer. Otherwise there is no possibility of the color tuning film being able to act in the disclosed manner. The claims are therefore anticipated and the rejection maintained.

7 Claims 1,3,6 and 7 are rejected under 35 U.S.C. 102(a) as being clearly anticipated by Mizutani et al. '626.

Mizutani et al. '626 teaches the use of adhesive layers which have the appropriate amount of plasticizers adjacent to the hologram so that no shifting occurs. Examples illustrated in figures 10 and 11 show the effects of the molecular weight of the various adhesives on the replay wavelength and use photopolymeric compositions. Figure 1 shows the structure.

The applicant ignores the 1,500,000 MW example shown in figures 10 and 11 which shifts to longer wavelengths and the 1,000,000 MW example which is shown the decrease in replay wavelength in both figures. Only the 500,000 and 800,000 MW samples seem to stay at the

recording wavelength. If there is no shifting component in the adhesive layer, then why does the shifting occur in the cited examples and why is it important enough to graph ? The rejection is maintained.

8 Claims 1-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morii et al. WO/98/12607.

Morii et al. WO/98/12607 teaches the use of various adhesive agents (45/13-22). The disclosure of the impregnation of the adhesive with encapsulated diffusing materials is also disclosed. (pages 48-50). The use of adhesive layers which do not contain plasticizer or the like and acts as a barrier layer is disclosed. (25/22+).

It would have been obvious to use either the barrier layer adhesives or those impregnated with encapsulated diffusion materials in the exemplified structures based upon the disclosure to do so.

The applicant argues that the change int he hologram structure is not taught. The examiner disagrees noting that in the US Patent corresponding to this reference, (6066378) at column 45 at line 62 through column 46 line 5, that the plasticizer or monomer is released and alters the replay wavelength or broadens the diffraction range of the hologram. The current claim language does not exclude action on the laminate being necessary to facilitate the shifting. The rejection stands.

9 Claims 1-4,6-17 and 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ueda et al. '598 and Smothers et al. EP 0407772, in view of Mizutani et al. '626 and/or Kai et al. JP 06-056484.

Smothers et al. EP 0407772 teaches the use of a layered element to transfer monomer. plasticizer or the like between a hologram and an adjacent layer containing these. The swelling or shrinking of the fringes is disclosed. curing of the hologram and the diffusion element may be done at any time to reduce diffusion. (8/15-9/7) The use of various plasticizers and surfactants is disclosed. (6/17-38).

Kai et al. JP 06-056484 teaches with respect to figure 4 a structure which is a substrate, a PVB layer (5), a PET layer (6), a hologram (4), a synthetic resin not containing a plasticizer (2) and a second substrate (3'). [0020).

It would have been obvious to one skilled in the art to modify the teachings of Ueda et al. '598 by using the adhesive layers disclosed by Mizutani et al. '626 and/or Kai et al. JP 06-056484 in place of the adhesive layer used to control the shifting of the hologram in a manner analogous to that disclosed within Smothers et al. EP 0407772.

The examiner relies upon Smothers and Ueda et al. to establish the species, ie. plasticizers, monomers, etc., which cause the shifting and relies upon the secondary references to establish that at least some of these are present in adhesive compositions. The applicant offers no specific reasons why the combination fails and therefore the rejection stands.

10 Claims 1-4,6-17 and 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ueda et al. '598 and Smothers et al. EP 0407772, in view of Morii et al. WO/98/12607

It would have been obvious to one skilled in the art to modify the teachings of Ueda et al. '598 by using the adhesive layers disclosed by Morii et al. WO/98/12607 and cure them as needed in place of the adhesive layer used to control the shifting of the hologram in a manner analogous to that disclosed within Smothers et al. EP 0407772.

The examiner relies upon Smothers and Ueda et al. to establish the species, ie. plasticizers, monomers, etc., which cause the shifting and relies upon the secondary references to establish that at least some of these are present in adhesive compositions. The applicant offers no specific reasons why the combination fails and therefore the rejection stands.

11 Claims 1-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ueda et al. '598 and Smothers et al. EP 0407772, in view of Yamagishi et al. JP 03-157684, Tarumi et al. '107 or Weber et al. '863.

Yamagishi et al. JP 03-157684 teaches the use of polymerizable adhesives comprising acrylates and/or methacrylates together with a photoinitiator which do not damage the hologram.

Tarumi et al. '107 teaches the use of various adhesives including acrylate and Epoxy adhesives which are UV curable (table 1 and 5/40-6/65)

Weber et al. '863 teaches the use of various adhesives adjacent to holographic recording media including UV curing acrylates. (8/40-62) The use of diffusion elements is also disclosed. (7/6-9)

It would have been obvious to one skilled in the art to modify the teachings of Ueda et al. '598 by using the adhesive layers disclosed by Morii et al. WO/98/12607 and cure them as needed in place of the adhesive layer used to control the shifting of the hologram in a manner analogous to that disclosed within Smothers et al. EP 0407772.

The examiner relies upon Smothers and Ueda et al. to establish the species, ie. plasticizers, monomers, etc., which cause the shifting and relies upon the secondary references to establish that at least some of these are present in adhesive compositions. The applicant offers no specific reasons why the combination fails and therefore the rejection stands.

12 **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

13 Any inquiry concerning this communication or earlier communications from the examiner should be directed to Martin Angebranndt whose telephone number is (703) 308-4397.

I am normally available between 7:30 AM and 5:00 PM, Monday through Thursday and 7:30 AM and 4:00 PM on alternate Fridays.

If repeated attempts to reach me are unsuccessful, my supervisor may be reached at (703) 308-2464.

Facsimile correspondence should be directed to (703) 305-3599.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0661.

Martin J. Angebranndt
Primary Examiner, Group 1750
February 21, 2001